



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

monthly wages usually paid the best stone-cutters, and the man consented. Having made the necessary arrangements, he took him to a clothing-store in Salem, obtained him a suitable outfit, then took him into his chaise and brought him to Quincy. Governor Robbins added, that he introduced Mr. Tarbox to several of the principal stone-dealers, and that it was not three months before every stone-cutter in Quincy could split stone with small wedges as well as Mr. Tarbox. Also that this improvement in the working of granite had in a very short time the effect to reduce the price to five eighths of its former cost; that is, that the cost of the dimension stone wanted for the prison, which had before been \$4.00, was afterwards reduced to \$2.50, and other granite work in similar proportion.

I have been thus particular in naming persons and stating circumstances, in the hope that some persons still live, either at Salem or Quincy, who can throw light on the subject. It would be very extraordinary if an art of so much importance should be traced to a source so obscure as poor Mr. Tarbox, who seems to have been hardly conscious that he was doing anything extraordinary. It may be that this whole narrative rests on some mistake, and that a different origin for this art of working granite may be shown; if so, it is very desirable that it should be made known to the public.

Four hundred and seventy-fourth meeting.

January 10, 1860. — MONTHLY MEETING.

The PRESIDENT in the chair.

The correspondence of the Academy, since the preceding meeting, was read by the Corresponding Secretary.

Professor Agassiz gave a sketch of the plan upon which he is arranging the Museum of Comparative Zoölogy at Cambridge; viz. in separate faunæ, with also an assorted typical collection to illustrate the general systematic arrangement.

Dr. C. T. Jackson exhibited a specimen of meteorite containing olivine or chrysolites, like the celebrated Siberian meteorite of Pallas. The specimen was detached from a large mass, at least five feet in diameter, recently discovered upon the summit of a mountain in Oregon, in the vicinity of Rogue River. Dr. Jackson also exhibited specimens of some other North American meteorites.

Professor Horsford directed attention to instances of spontaneous combustion of saw-dust, used to catch the dripping of oil from machinery.

Professor Jeffries Wyman read a paper on the anatomy, and especially the muscular system, of *Troglodytes Gorilla*.

Mr. Folsom exhibited a specimen of the smallest ancient gold coin known. It bears the head of Jupiter Ammon, and is of an age anterior to B. C. 500. The only other specimen known is in the British Museum.

Professor Agassiz presented his views of the tertiary deposits, as consisting, in each of its three great divisions, of a greater number of successive deposits, and these of a much more distinct character, than is generally thought. He expressed his conviction, not only that the tertiary shells which have been regarded as identical with existing species are specifically different, but also that in some cases shells of successive beds of the same formation, which have been taken for the same, really belong to two, three, or more species.

A discussion respecting the evidences of synchronism between distant deposits of the same epoch ensued between Professor W. B. Rogers and Professor Agassiz.

Professor W. B. Rogers exhibited a stereoscopic slide, which, by a simple contrivance, enabled the observer to rotate two equal slips of ivory on a black ground in such manner as to give them any desired inclination to one another, thereby causing the resultant visual figure to assume various perspective attitudes in the vertical plane, and, by alternate convergence or divergence of the slips, giving it a vibrating motion in that plane. This arrangement he offered as the simplest experimental means of illustrating the principle of visual relief, as produced by combining the twin pictures of a stereoscope. He made some remarks in continuation of former observations in regard to the theory of vision by the successive combination of corresponding points, as maintained by Sir David Brewster, and described a further experiment which he regarded as wholly incompatible with that theory.

The immediate purpose of the experiment is to present to the two eyes the respective component pictures, *not simultaneously*, as in the usual mode of binocular combination, but *in succession* or rapid alternation. This is done most simply by placing one of the common twin drawings, as of a crystal or other solid traced by white lines on a black ground, at a distance of about twice the limit of distinct vision, and, by a proper arrangement, moving backward and forward over the face of the drawing a slip of black pasteboard, so as alternately to cover and expose first one and then the other picture, taking care that no part of one shall be in view while the other is wholly or in part revealed. If, while the moving screen is briskly vibrated, the optical axes be converged to an intermediate point, as in the combination of twin pictures by what has been falsely termed the squinting process, *the observer will see the resultant picture in the same position, and with as complete relief, as if both pictures were permanently uncovered.* As might be expected, the same effect is obtained with pictures viewed in the stereoscope; and in this case the experiment is most readily made with transparent slides and an opaque screen, caused to vibrate or to revolve near the surface of the slide on which the light is received. As in these observations the corresponding points of the twin drawings can never be seen at the same time, it is inconceivable that any adjustments of the optic axes can be made to unite them pair by pair, as is claimed by the theory of Brewster. The resultant binocular perception is here due to *a present picture* in the one eye, combined with the *picture previously made* in the other, and which, by the well-known law of visual sensibility, continues its impression for a short time after the occlusion of the light. But this latter, having been impressed on particular parts of the retina, cannot be shifted to other parts point by point, as would be necessary to effect the combination with the corresponding actual ray-impressions on the other eye. This experiment, therefore, confirms the conclusion drawn by Professor Rogers at a former meeting from

observations on the binocular combination of visual spectra, and offers, he thinks, a conclusive argument against the theory maintained by Brewster, and which has been so widely accepted.

Four hundred and seventy-fifth meeting.

January 25, 1860. — STATED MEETING.

The PRESIDENT in the chair.

The Corresponding Secretary read a letter from Professor George C. Swallow, in acknowledgment of his election as an Associate Fellow of the Academy.

Mr. Chauncey Wright and Mr. Simon Newcomb, of the Nautical Almanac Office, Cambridge, were elected Fellows in Class I. Section 1, Mathematics.

Professor Agassiz, followed by Professors Parsons, W. B. Rogers, and others, discussed several points in natural history and geology in reference to their bearing upon the origin and distribution of species.

Professor Gray communicated, from the author, the following: —

Characters of some New Grasses collected at Hong Kong and Vicinity by Mr. Charles Wright in the North Pacific Exploring Expedition. By COLONEL WILLIAM MUNRO, C. B., &c., of the British Army.

1. *BERGHAUSIA MUTICA* (sp. nov.): racemo decomposito; pedicellis apice barbatis; *spiculis muticis scabro-puberis*; *foliis linearibus* utrinque attenuatis margine pilis longis fimbriatis, vaginis glabriusculis apice longe fimbriatis. — An *Miquelia barbata*, Nees in Rel. Meyen.? A *Berghausia patula* differt floribus majoribus, arista nulla, pedicellis etc. multo longioribus et dissitis.

Hong Kong.

2. *BERGHAUSIA PATULA* (sp. nov.): racemo decomposito; pedicellis apice barbatis; *spiculis hirsutis seta simplici basi non torta aristatis*; *foliis lineari-lanceolatis* utrinque attenuatis. — Gluma valde varians. —